The 'French District'

Sustainable Urban Neighborhood in Tubingen, Germany

BMZ Federal Ministry for Economic Cooperation and Development

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[1] Cover photo: The "French District's" meeting point, the Aixer Straße with shops and bars.

IMPRINT

Author: Sven Ledwoch

Editor: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

P.O. Box 5180
65726 Eschborn, Germany
www.giz.de

Division 44 – Water, Energy, Transport
Sector Project "Transport Policy Advisory Services"

On behalf of
Federal Ministry for Economic Cooperation and Development (BMZ)

Friedrich-Ebert-Allee 40
53113 Bonn, Germany
www.bmz.de

Manager: Manfred Breithaupt
Editing: Sven Ledwoch
Photos: Breithaupt, Doderer, Ledwoch
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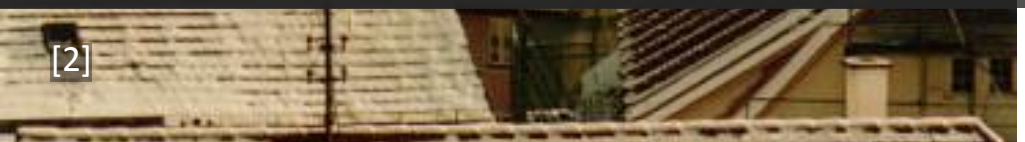
1. Tubingen – Home of a sustainable lifestyle

Young, lively and green.

Tubingen is a traditional university town with 89,000 inhabitants in central Baden-Württemberg, Germany. It is situated 30 km (19 miles) south of the state capital, Stuttgart, on a ridge between the Neckar and Ammer rivers. Maybe it is because of Tubingen's lively, young and open-minded socio-structure (one out of ten people living in Tubingen is a student) that the city has always been a vanguard in matters of sustainability. Governed by the green party since 2007**,** the city and its inhabitants have come up with a strong campaign for more sustainability, energy efficiency and the use of renewable energy. As urban and transportation planning are main contributors in energy saving, the "French District" is, together with the "Quartier Vauban" in Freiburg, a landmark in the development of sustainable neighbourhoods.

Source: City of Tubingen 2012



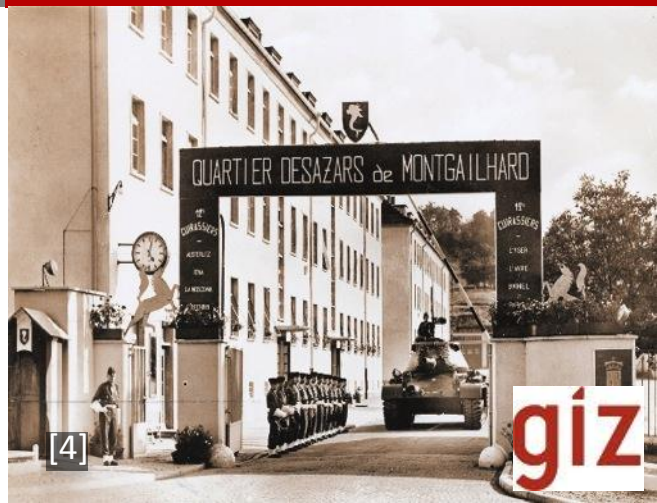
[2] View over Tubingen's historic centre at wintertime

[3] Areal view of the “French District”
[4] The French barracks before conversion (post card 1954)

2. The idea behind a special urban development project

Tubingen’s „French district“, in German „Französisches Viertel“, is an urban brownfield development project. Left by the French troops in 1991/92**,** the 60-hectare (70 sq.yr.) military wasteland situated about 3 km south of Tubingen’s city centre was planed to be converted into dense neighbourhood with mixed urban functions. In a continuing development process**,** new living space for 6,000 inhabitants and 2,500 jobs should be created. Imaginative building typologies and uses should enable the combination of living, supply, commerce and light forms of industry. Further on, the neighbourhood should be characterized by low energy housing and an innovative transport concept.

Source: WfE 2005



3. Ecological and economic benefits

Climate change and peak oil: Urban life is about to change dramatically in the forthcoming decades. How do sustainable urban structures contribute to save not only valuable natural resources but also money?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Saving space

Tubingen's "French District" is designed densely with 150-200 inhabitants per hectare. Dense urban structures help to save infrastructure costs as well as the ecological disadvantages resulting from impervious surfaces, such as a higher risk of flooding.

Reducing Traffic

Mixed urban functions demand less trips – to work, shopping, and leisure activities. Due to the "compact city" concept trip distances are shorter, too. This saves traffic volumes, energy, local emissions, traveling time, and contributes to safer transport.

Saving Energy

In Tubingen**,** energy is not only saved by lower traffic volumes and more sustainable means of transportation, but also by energy efficient forms of housing. Most buildings in the "French District" are low or zero emission houses.

Promoting local economy

In the neighbourhood 2,500 jobs were created, most of them in the sector of qualified services (50% services, 20% industry, 20% cultural institutions, 10% retailers). Profiting from a higher value by selling fully developed parcels, enabled the city of Tubingen to support cultural institutions in the district.

Source: Stadtsanierungsamt 2009

Dense and green

[9] Housing block with public garden. Common space has been designed as green as possible, creating not only space to socialize and relax from daily routine, but it also contributes to urban cooling, a healthy urban climate and offers natural habitat of many plants and animals.

[10] Use of solar technology is very common. Most houses in the “French District” are zero energy buildings.

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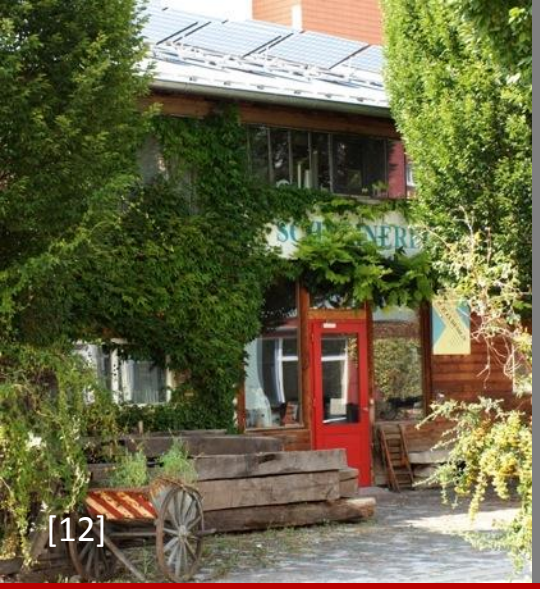
[12]

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Promoting local economy

[11] Small retailers contribute to the local economy as part of decentralized supply structures. Being independent from multiple shop chains, the added value remains “in the neighborhood”.

[12] Integration of light industry: A carpenter‘s workshop. Please note the solar panels installed on the roof.

[13] A general “repair shop” as a statement of a more sustainable way of economic activity and against throwaway society.

[11]

4. An innovative transport concept

Less trips, shorter trips and efficient modes of transportation are the main transport policy ideas of Tubingen's sustainable urban neighborhoods. See in this chapter how to achieve it.

[14]

[14] A frequented bike stand

[15] Restricted supply of motorized private transport infrastructure: A traffic calmed area, closed for through-going traffic

4. 1 Motorized private transport

Mobility should be accessible to everybody. However, this does not mean an access to motorized transport. Especially in urban areas, this mode of transportation has ecologically and economically very difficult characteristics of performance. Main negative impacts of motorized transport are high levels of local emissions, high infrastructure costs, often subsidised by the general public (including non-car-holders), increasing travel-times through high car traffic volumes, and a negative influence on road safety, and the public health system. In this context, the supply of motorized transport infrastructure in the „French District“ is, in favor of alternative transport modes like walking and cycling, very restricted.

Motorized private transport infrastructure supply

As figure 16 shows, all living streets are at least traffic calmed, some are closed for motorized transport. This supports the use of public space as shared space and improves quality of life in the district.

The capacity demand for road infrastructure is limited. Car traffic generation is, due to a low level of car-ownership (220 cars per 1,000 inhabitants in the “French District”, compared to 493 cars per 1,000 inhabitants in total Tubingen) low; also there is almost no through-going traffic.

In order to reduce the necessity of owning a car, car sharing is available, if a car should be needed.

- Regional connection V_{max}=50km/h
- Local distribution road V_{max}=30km/h
- Access road V_{max}=30km/h
- Living street, traffic calmed
- Living street, closed for motorized transport

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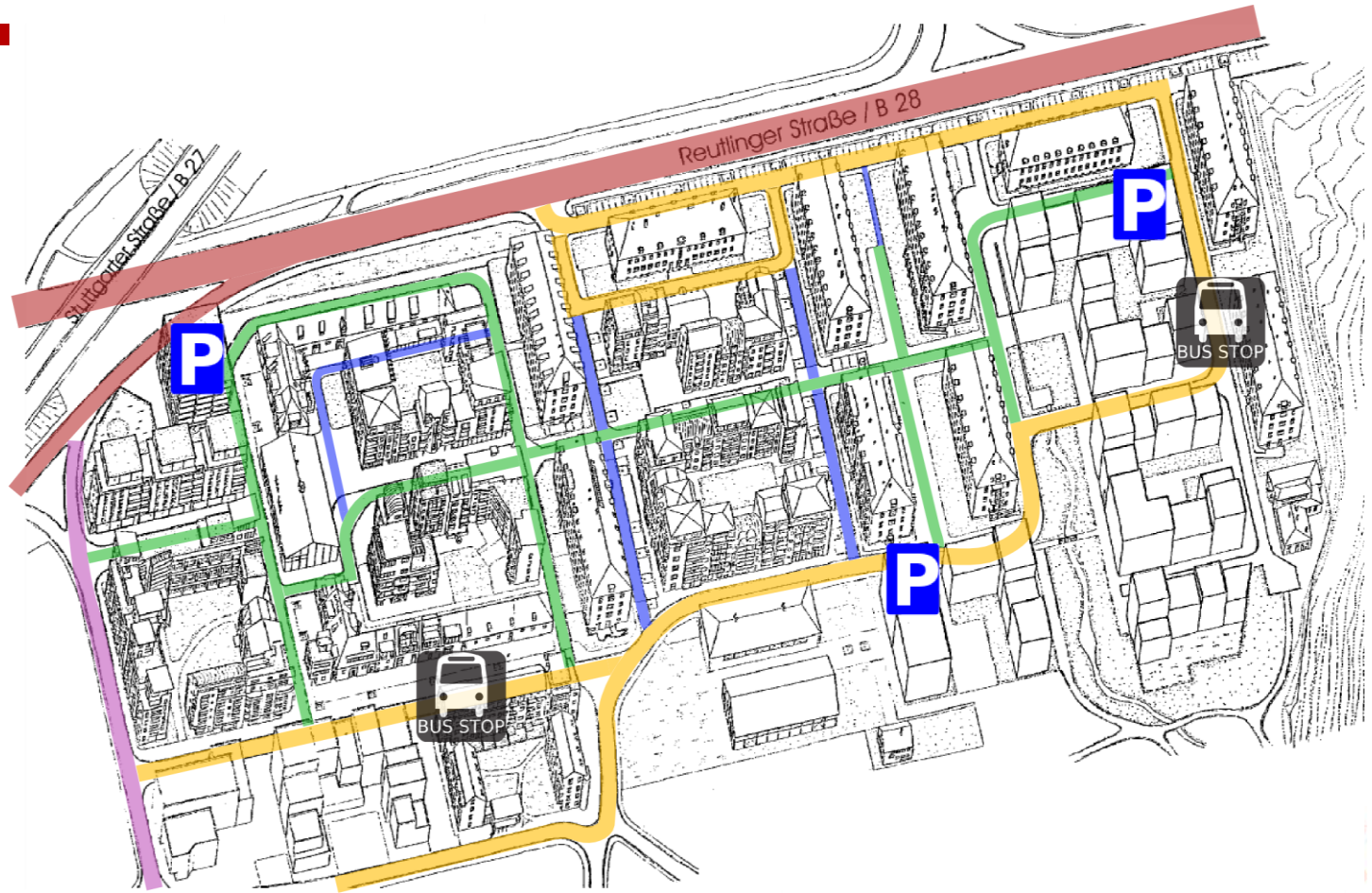


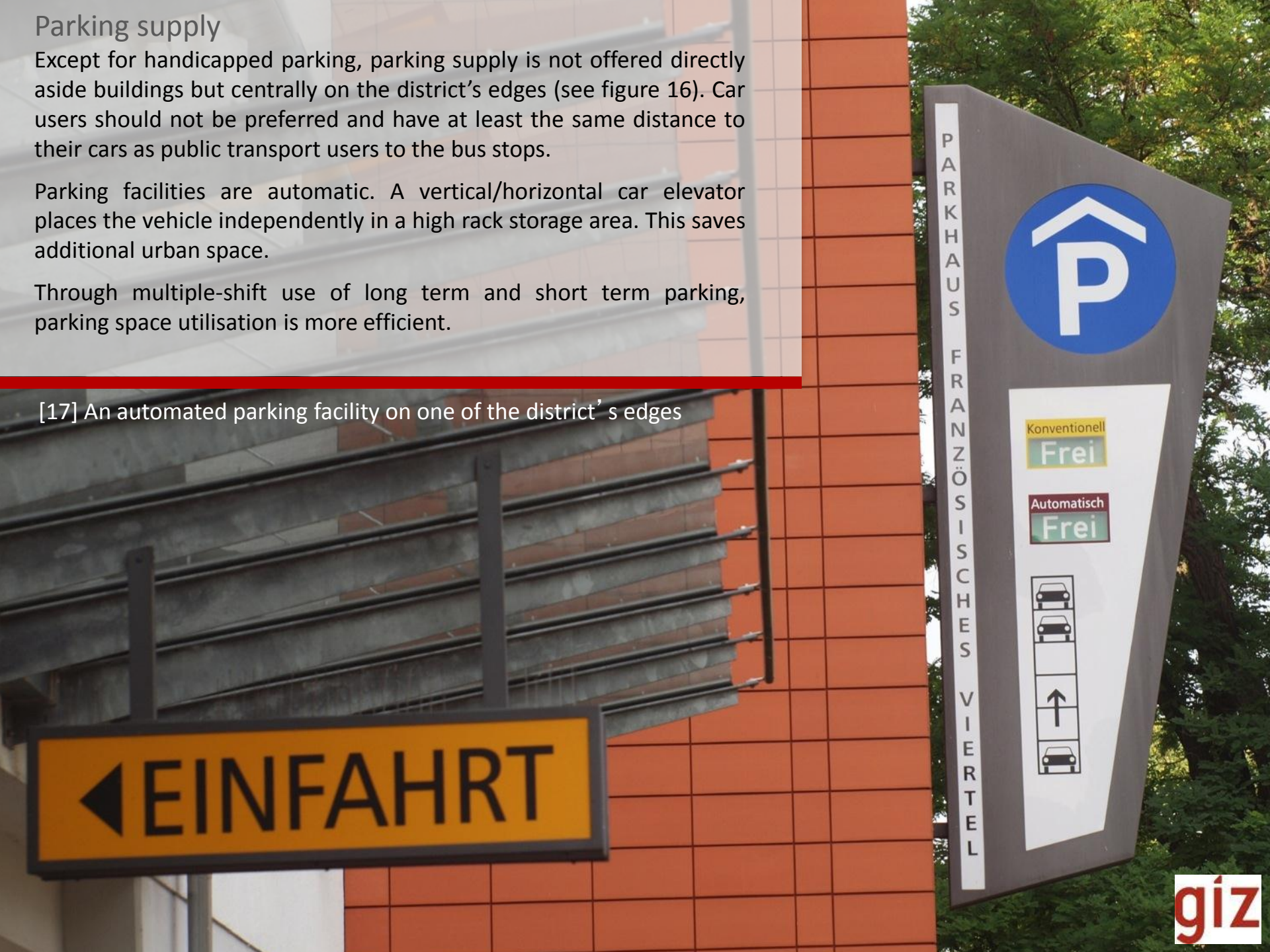
Source: Ahrens 2009, Walter 2011

Parking supply

Except for handicapped parking, parking supply is not offered directly aside buildings but centrally on the district's edges (see figure 16). Car users should not be preferred and have at least the same distance to their cars as public transport users to the bus stops.

Parking facilities are automatic. A vertical/horizontal car elevator places the vehicle independently in a high rack storage area. This saves additional urban space.

Through multiple-shift use of long term and short term parking, parking space utilisation is more efficient.



[17] An automated parking facility on one of the district's edges

Due to low volumes car traffic volumes, cycling is convenient and safe. There are no separate cycle lanes or paths, but this is also not necessary.

For parking and locking a bicycle, numerous bike stands are at service.

The district's compactness makes walking trips short and efficient. Many small shortcuts make it even quicker.

4. 2 Non-motorized transport

[18] Bicycle parking facilities

[18]

Public transport supply is attractive. The „French District“ is served by three urban bus lines with a bus leaving every 10 minutes during the day, and every 30 minutes at night. The buses connect to a variety of regional trains at Tubingen’s central railway station after a 20 minutes ride. The city centre and the university district can be reached within 25 minutes. All busses are low-floor vehicles, also equipped with wheelchair ramps. Bus stops are accessible for handicapped public transport users without barriers.

4. 3 Public transport

[19] A Tubingen urban transit bus departing from the stop at Aixer Straße

In summary, the "French District's" transport concept is based on the approach to avoid traffic, where not urgently necessary, shift it to sustainable modes of transportation and improve the last unavoidable bit of motorized traffic in terms of ecologic efficiency.

AVOID

MIX OF URBAN FUNCTIONS
Less trips to work, shopping and leisure activities. Of course calling for a certain supply of these functions.

DENSE URBAN STRUCTURES
Short distances within the neighbourhood lead to shorter trip lengths, which might influence mode choice.

SHIFT

TRANSPORT ALTERNATIVES
Non-motorized transport infrastructure (walking: pedestrian zones, living streets, sidewalks, and crossings; shared space and for cyclists: hierarchic and dense route network with uninterrupted cycle paths, bike parking facilities, transfer to other transport modes).
Attractive public transport supply (accessibility, service frequency, travel times, reliability, safety, comfort).

REDUCED MOTORIZED TRANSPORT INFRASTRUCTURE SUPPLY
Parking management, traffic calming or streets closed for motorized traffic.

IMPROVE

IMPROVE UTILITY OF CARS
…as the number of passengers travelling in a car (car-pool) or at least the number of car holders (car sharing).

IMPROVE TECHNICAL PERFORMANCE AND LOWER ENVIRONMENTAL IMPACT
New technology energy efficient vehicles cause less local emissions are contribute not only to livable cities.

The mix of urban functions shows effects:
14% of trips that originate in the "French district" stay within the neighbourhood.

Source: Walter 2011


[20]

4. 4 Benefiting from a sustainable neighbourhood


[21]

[20] Green and dense housing structures
[21] Livable urban space invites to socialise

Less cars

In the “French District” the number of car owners is lower compared to Tubingen in general and the overall average of German cities.

Car-free households

38% “French District”
34% Tubingen
36% Germany (cities*)

Level of motorization (cars per 1,000 inhabitants)

220 “French District”
493 Tubingen
408 Germany (cities)

*Weighted average of Germany’s 44 largest cities

Source: Ahrens 2009, Walter 2011

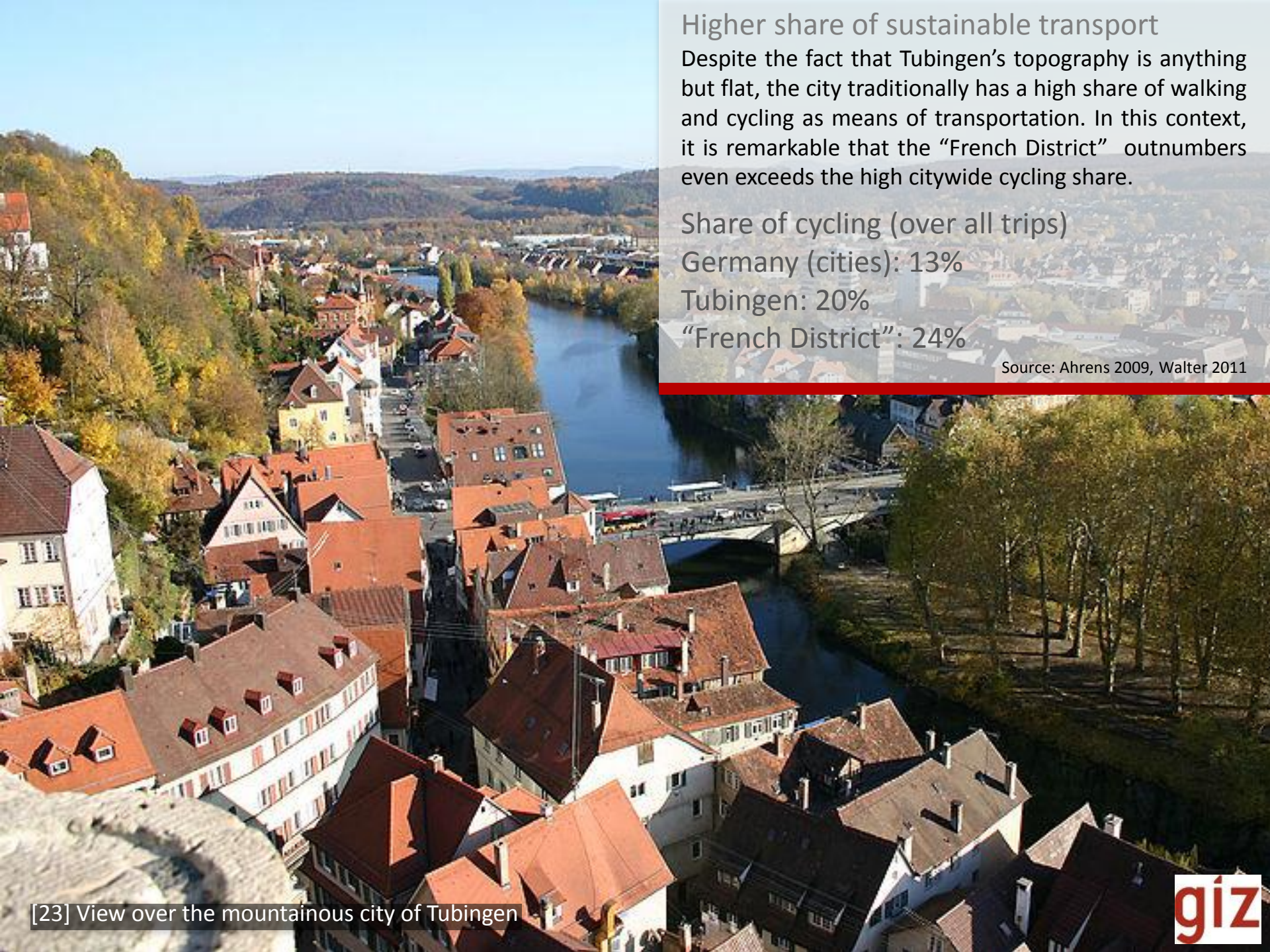
[22] As this transport vehicle demonstrates, shopping can not only be done by car

Higher share of sustainable transport

Despite the fact that Tubingen's topography is anything but flat, the city traditionally has a high share of walking and cycling as means of transportation. In this context, it is remarkable that the "French District" outnumbers even exceeds the high citywide cycling share.

Share of cycling (over all trips)
Germany (cities): 13%
Tubingen: 20%
"French District": 24%

Source: Ahrens 2009, Walter 2011

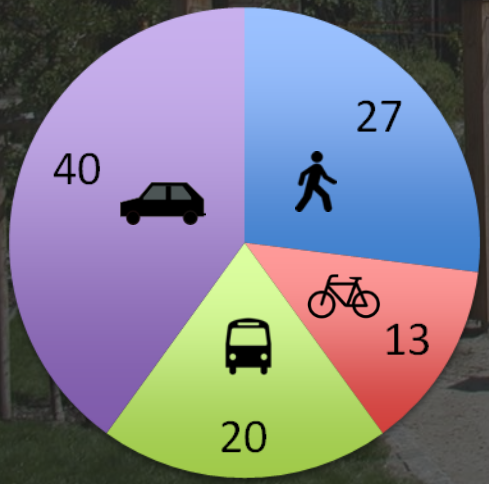


[23] View over the mountainous city of Tubingen

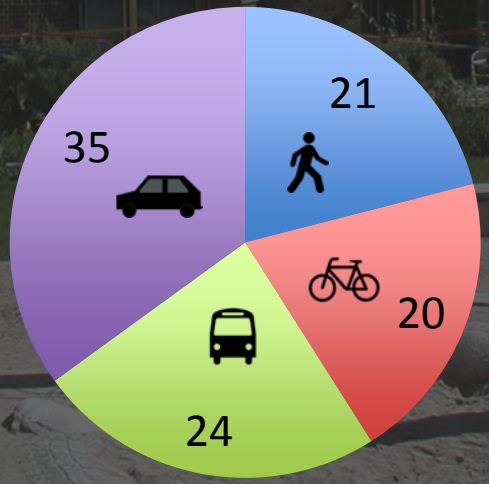
Compared...

Modal share over all trips* [in %]

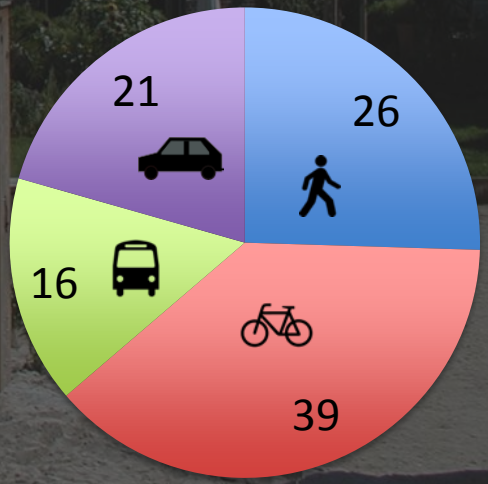
Germany (cities)



Tubingen



"French District"



[24] *Origin and destination to/from elsewhere beyond Tubingen, plus internal traffic

Source: Ahrens 2009, Walter 2011

[25]

[24] Good local child care infrastructure reduces the need to travel

[25] Parked bikes

- Walking
- Cycling
- Public Transport
- Motorized Private Transport

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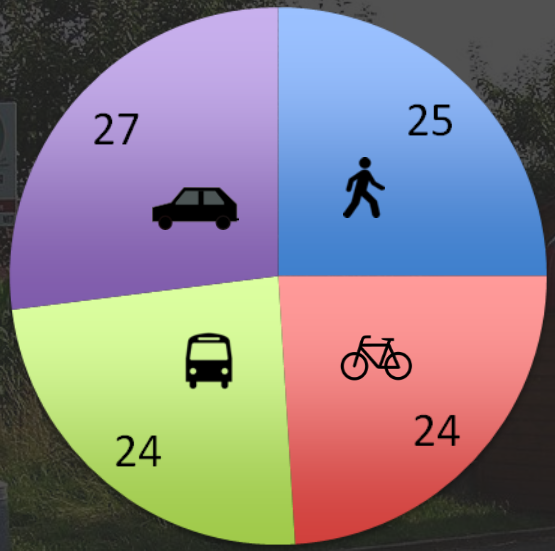
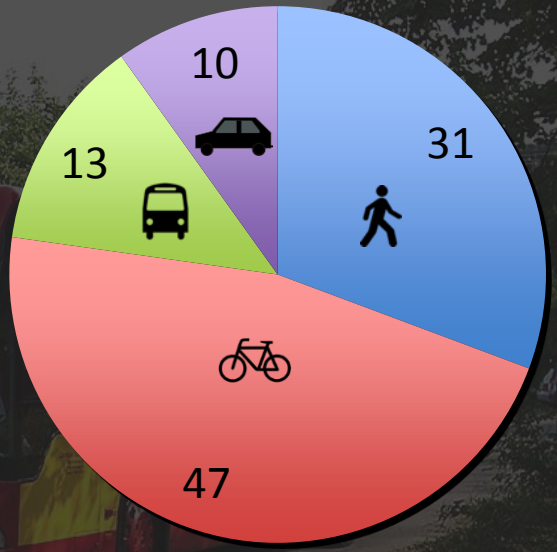
Modal share, internal traffic* [in %]

Tubingen



Compared...

"French District"



[26]

*With origin and destination within...

Source: Walter 2011

[27]

- Walking
- Cycling
- Public Transport
- Motorized Private Transport

[26] The so-called "TÜBus"

[27] Living is arranged densely in this street

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Boris Palmer, member of the Green Party and mayor of Tubingen since January 2007. In order to help fighting climate change, he has introduced the local campaign "Tübingen macht blau" with the goal of reducing CO_2 emissions in the city by 70%.

5. "Tomorrow's mobility"

Mr. Palmer, you are one of the great supporters of the "French District", what in your opinion characterizes its transport concept?

Palmer: First of all, it is a social transport concept. Separation of urban functions is outdated. In the past, the idea was to place everything outside the city: Industry, shopping malls close to the highways, afterwards you go to sleep in in boring commuter towns. Today we need to do the opposite.

Everything should be close to each other. But you still need a solution for transport?

Palmer: Sure, nobody wants to live next to the supermarket or to the highway. The secret of tomorrow's mobility lies within parking management. Cars don't go where they aren't able to park.

So maybe people won't go there either.

Palmer: The opposite is, what's happening. Being almost car-free has a positive impact on the neighbourhood's sociology. If people arrive by car in their basement garage and access their flats directly by elevator, they don't meet anybody and have less social contact. The phenomenon of a dead suburb.

Do you think, this model could be adapted successfully in other – bigger – cities as well?

Some people think that it isn't. To me, that's intellectual laziness. Housebuilding communities on brownfields yet exist in Hamburg and Berlin. It's quite the contrary. It makes me wonder how more and more neighbourhoods are not being constructed for the people but for investors.

Source: SZ 2012

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Sources

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